

PF030152

Serial No. 10/572,691
Customer No. 24498
Amendment dated July 25, 2011
Reply to Office Action of April 27, 2011

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Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of the Claims

1. (currently amended) Device for driving a plasma display panel having a plurality of cells arranged in rows and columns, the rows of cells being distributed in a plurality of blocks of lines, said device comprising row address means for selectively addressing the display cell rows within the blocks and creating, where required, in cooperation with means for selectively applying data voltages to the display columns, an electrical discharge inside the cell disposed at the intersection of the row and column selected during an address phase, and sustain means for sustaining the electrical discharges inside said cell during a sustain phase immediately following the address phase, wherein said row address means comprise separate row address means for each said block of rows for addressing successively the blocks of rows by applying a first voltage to the cells of the selected block and a second voltage to the cells of the other blocks, said second voltage being greater than the first voltage, said separate row address means comprising:

- at least one row driver circuit connected between first and second connection lines and designed to apply, during an address phase specific to said block of rows, a potential of one of said first and second connection lines to a plurality of rows of the block,

- a capacitor, a first terminal of which being coupled to the first connection line via a first switch and a second terminal of which being coupled to the second connection line;

- a second switch for selectively applying an address voltage to the second connection line during the address phase;

- a first diode connected to the common point of the first switch and of the capacitor for supplying the first voltage to the capacitor during the address phase.
~~and said row address means and/or sustain means are capable of allowing a bi-directional current to flow within the cells of the display during said address and/or sustain phases.~~

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2. (currently amended) Device according to Claim 1, wherein the separate row address means for each block of rows further comprises:

~~—at least one row driver circuit for each of the blocks of rows connected between the first and second connection lines and designed to apply, during an address phase specific to said block of rows, the potential of one of said first and second connection lines to a first electrode of the cells of a plurality of rows of the block,~~

~~—a first switch for selectively applying an address voltage to the second connection line during the address phase;~~

~~—a first diode connected in series with a second switch for applying said first voltage to the first connection line during the address phase, said diode being oriented so as to allow a current to flow in the a direction of the first connection line;~~

~~—a capacitor for connecting the cathode of the first diode to the second connection line;~~

~~—a switching means for isolating said first connection line from the sustain means of said driver device during the row address phase of the relevant block, and~~

~~—a third switch for applying said second voltage to said first connection line during the address phases specific to the other blocks.~~

3. (previously amended) Device according to Claim 2, wherein said third switch is common to the address means of the blocks of rows.

4. (previously amended) Device according to Claim 3, wherein the switching means is a switch connected between the sustain means of the device and said first connection line, which switch is open during the row address phase of the relevant block.

5. (currently amended) Device according to Claim 2, wherein said second voltage is equal to said a high sustain voltage.

6. (currently amended) Device according to Claim 2, wherein the sustain means comprise:

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- third and fourth switches for selectively applying a high sustain voltage and a low sustain voltage to said first connection line of the blocks when the switching means of said blocks is in the an on state,

- fifth and sixth switches for selectively applying said high sustain voltage and said low sustain voltage to a second electrode of the cells of the plurality of rows selected by said row driver circuit, said third and sixth switches on the one hand, and said fourth and fifth transistors on the other, being controlled in an identical manner.

7. (previously amended) Device according to Claim 6, wherein the sustain means additionally comprise:

- a second diode connected in series with said third switch and oriented so as to allow a current to flow into the first connection line of the blocks when the switching means of said blocks is in the on state, and

- third and fourth diodes connected in parallel with the third and fourth switches, respectively, and

- fifth and sixth diodes connected in parallel with the fifth and sixth switches, respectively.

8. (currently amended) Device according to Claim 3, wherein said third switch is connected in parallel with said a second diode.

9. (previously amended) Device according to Claim 6, wherein the sustain means additionally comprise a fifth switch inserted between the first and second connection lines of each block, which switch is open during the row address phase of the relevant block and closed during the sustain phase.

10. (Currently amended) Device according to Claim 9, wherein the switching means for isolating the first connection line from the sustain means of said driver device during the row address phase of the relevant block is comprises a seventh diode connected between the sustain means of the device and said first connection line, which diode is oriented so as not to allow a current to flow in the direction of the first connection line and in that the fifth switch is inserted between the sustain means of the device and said second connection line.

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11. (previously amended) Plasma display panel wherein it comprises a driver device according to Claim 1.